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ANNUAL REPORT TO THE BOARD OF SUPERVISORS COUNTY SURVEYOR'S OFFICE JANUARY 1, 1978

[Orange County]

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H. G. OSBORNE
DIRECTOR

C. R. NELSON
ASSISTANT DIRECTOR
DEVELOPMENT

FILE

The Honorable Board of Supervisors
County of Orange
Santa Ana, California 92702

SUBJECT: Annual Report, County Surveyor's Office

Gentlemen:

Transmitted herewith is the annual report of the County Surveyor's Office, which summarizes the activities of this office for the 1977 calendar year.

RECOMMENDATION: Receive and file.

Respectfully submitted,

C. R. Nelson
County Surveyor

Concurred by:

_____
H. G. Osborne, Director

RVW:mu
Enclosure

cc: County Administrative Office

ANNUAL REPORT TO THE BOARD OF SUPERVISORS
SURVEY SECTION - EMA
January 1, 1978

The Survey Section of the EMA consists of two separate groups: Office and Field Survey. The duties of each group and the work performed during 1977 are as follows:

SUBDIVISION MAP CHECKING UNIT - OFFICE GROUP

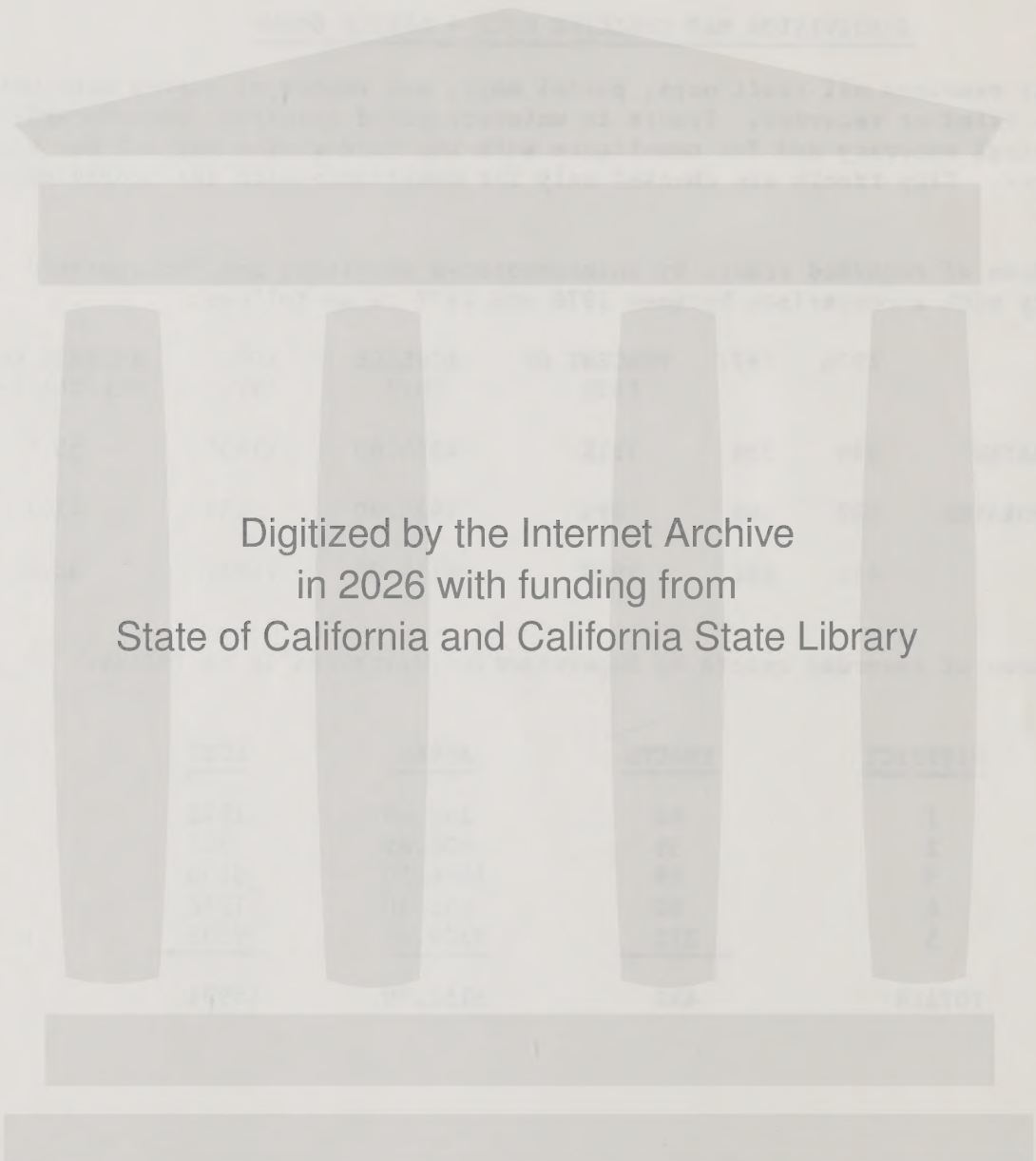
This unit examines all tract maps, parcel maps, and record of survey maps before they are filed or recorded. Tracts in unincorporated territory are checked for mathematical accuracy and for compliance with the Subdivision Map Act and County Ordinances. City tracts are checked only for compliance with the Subdivision Map Act.

A breakdown of recorded tracts by unincorporated territory and incorporated territory with a comparison between 1976 and 1977 is as follows:

	1976	1977	PERCENT OF 1976	ACREAGE 1977	LOTS 1977	AVERAGE LOTS PER TRACT-1977
INCORPORATED	304	336	111%	4216.40	11930	35.5
UNINCORPORATED	107	106	99%	1935.90	5051	47.7
TOTAL	411	442	108%	6152.30	16981	38.4

A breakdown of recorded tracts by Supervisorial Districts is as follows:

DISTRICT	TRACTS	ACRES	LOTS
1	46	243.40	1012
2	35	404.85	923
3	99	1466.20	3630
4	50	658.30	1818
5	212	3379.55	9598
TOTALS	442	6152.30	16981



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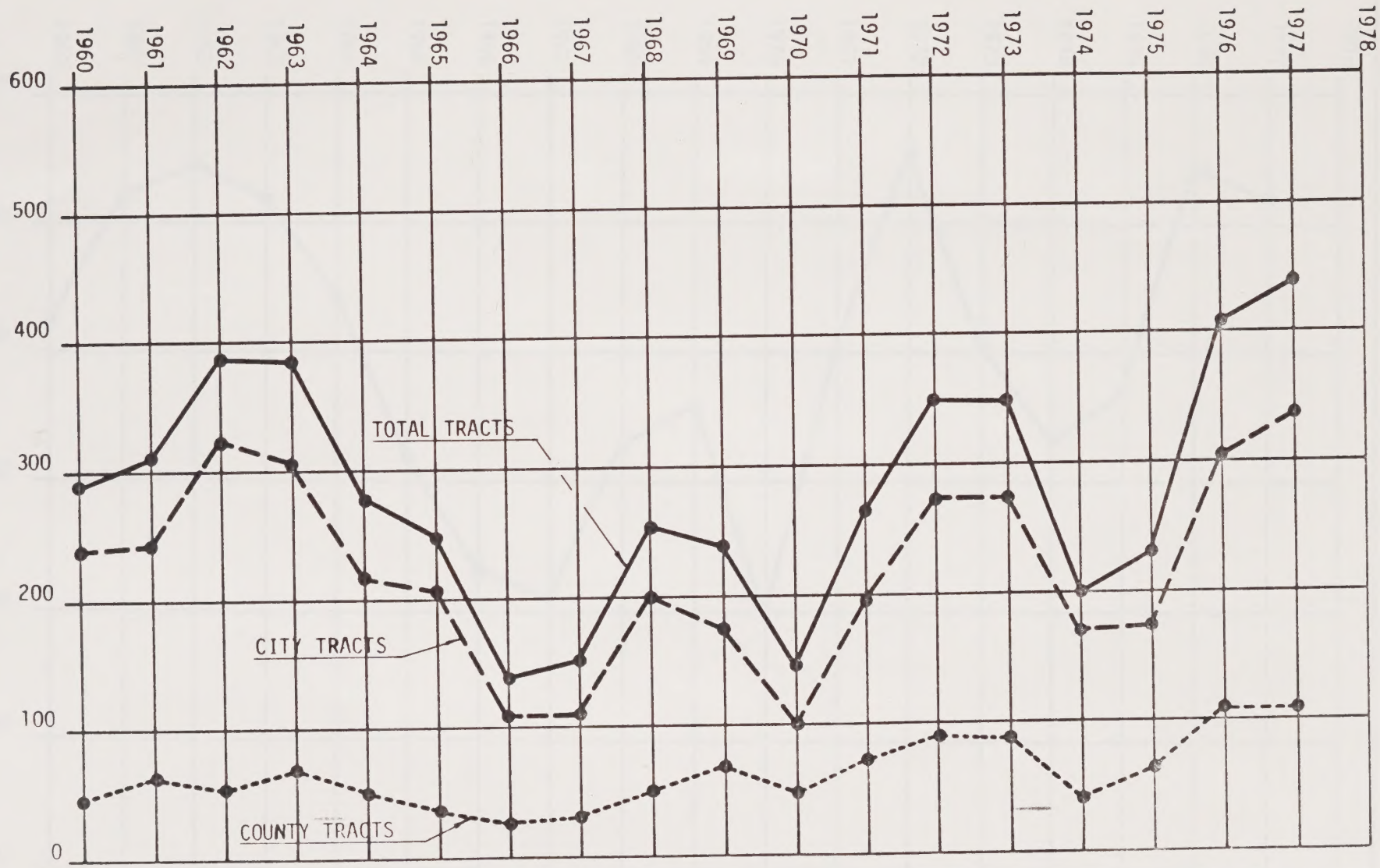
YEAR 1977 - TOTAL NUMBER OF TRACTS RECORDED

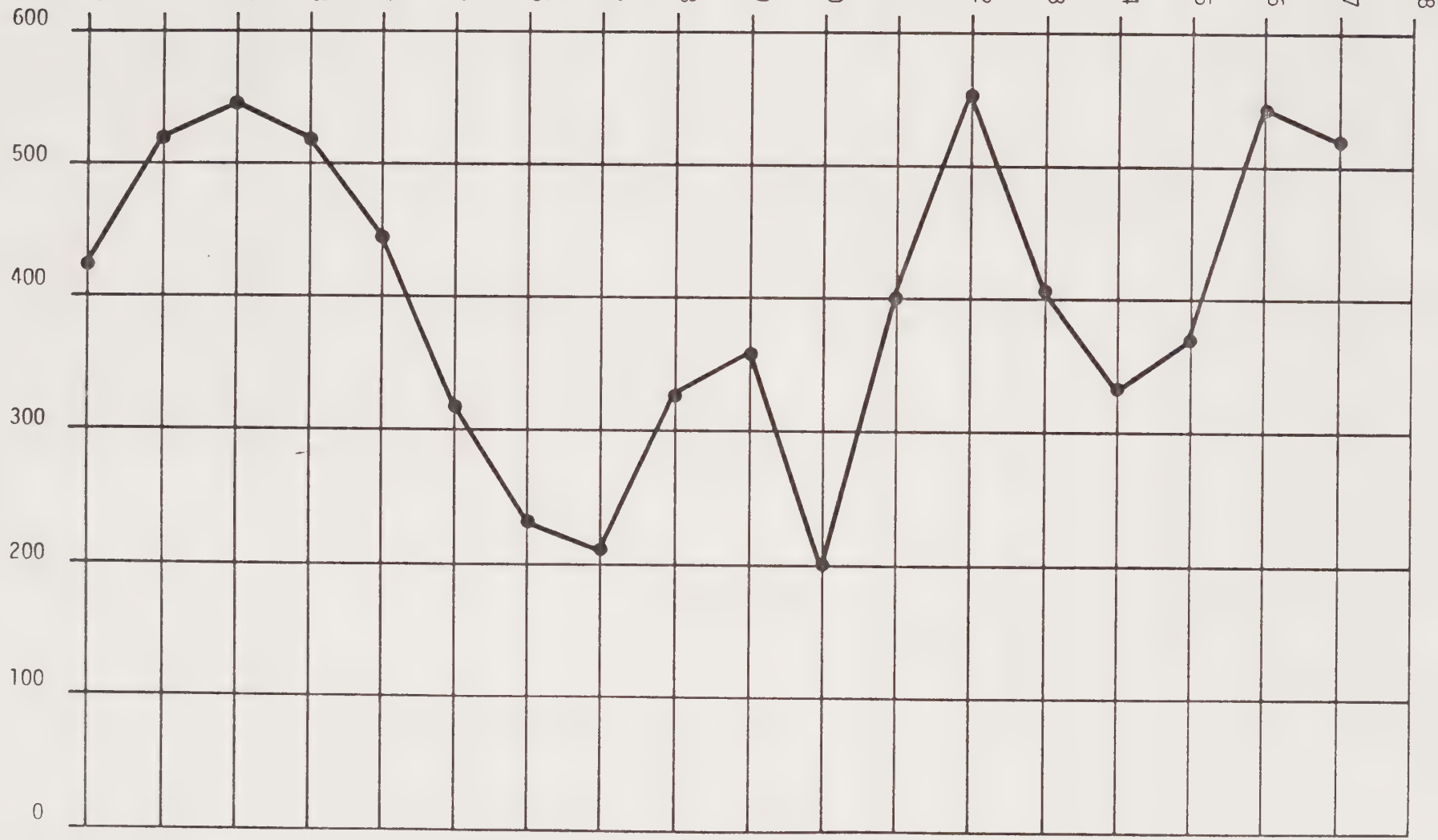
	No. Tracts 1976	No. Tracts 1977	No. Acres 1976	No. Acres 1977	No. Lots 1976	No. Lots 1977
Unincorporated Orange County	107	106	1830.37	1935.90	5076	5051
Anaheim	44	23	724.38	402.36	2367	1009
Brea	11	9	138.44	262.10	578	306
Buena Park	3	3	48.55	19.43	85	39
Costa Mesa	12	9	50.34	40.67	174	178
Cypress	2	7	6.38	28.56	50	115
Fountain Valley *	16	10	111.56	78.73	497	335
Fullerton *	20	12	275.06	171.80	905	501
Garden Grove	9	9	61.68	138.89	247	304
Huntington Beach	40	23	440.03	256.25	1797	619
Irvine *	48	105	314.09	1096.81	1289	4263
Laguna Beach	1	1	0.27	0.33	1	1
La Habra	2	8	12.89	65.42	4	258
La Palma	0	3	0	17.75	0	73
Los Alamitos	0	2	0	10.16	0	46
Newport Beach	8	7	108.61	123.22	235	200
Orange	25	19	350.83	242.66	892	658
Placentia	8	7	86.80	67.94	374	297
San Clemente	9	14	208.93	631.16	336	1147
San Juan Capistrano	3	6	60.64	124.11	72	242
Santa Ana	12	28	97.98	164.56	496	680
Seal Beach	0	2	0	5.44	0	43
Stanton	1	0	20.13	0	92	0
Tustin	3	2	16.28	8.82	72	39
Villa Park	2	1	19.29	9.84	19	17
Westminster	13	9	121.02	46.58	557	202
Yorba Linda	12	17	78.30	202.81	145	358
GRAND TOTAL	411	442	5182.85	6152.30	16360	16981

* County Subdivision Map Checking unit does not check the subdivision maps within the designated cities except for "County Recorder Review".

NUMBER OF RECORDED TRACTS



TRACT NUMBERS ISSUED



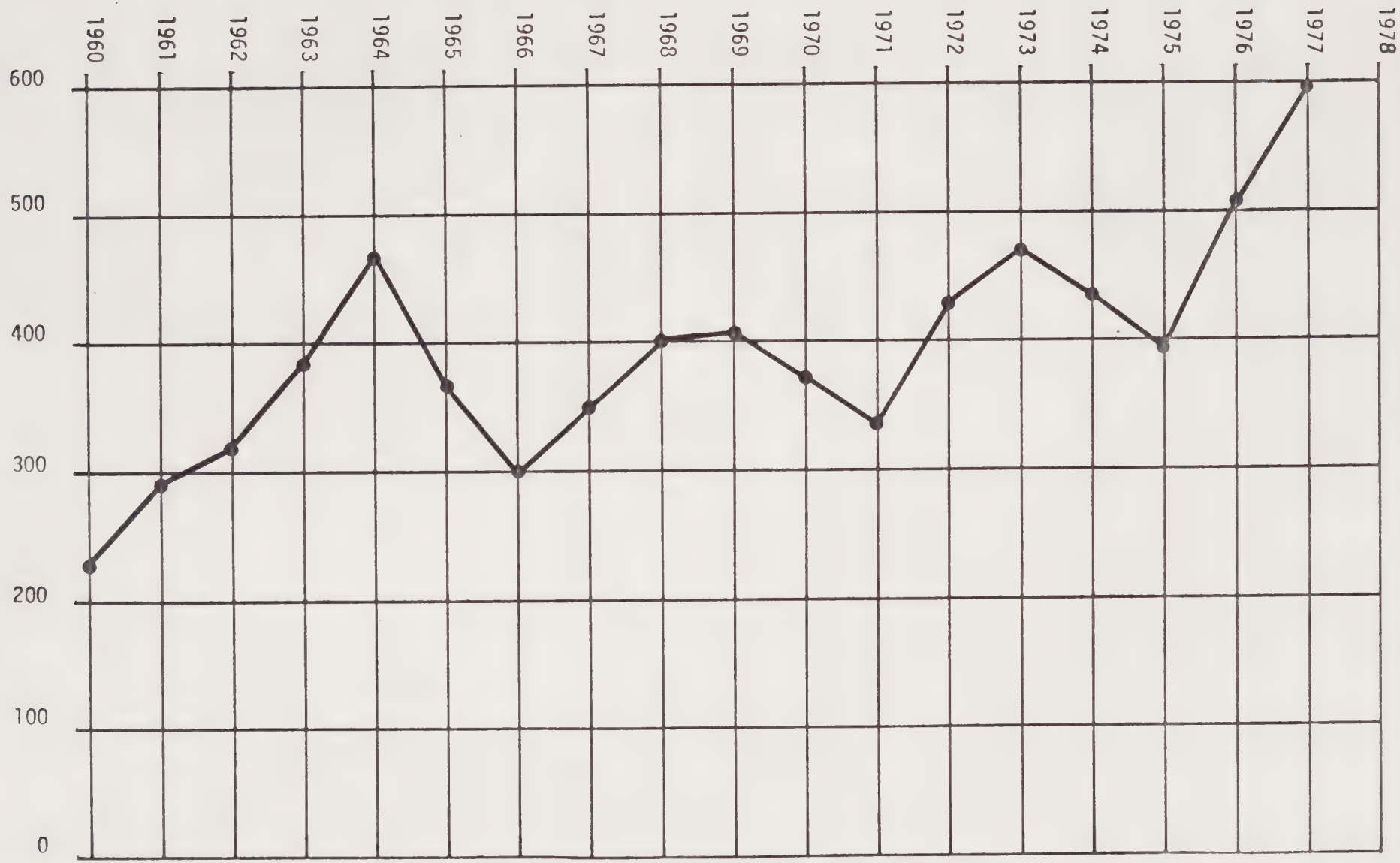
Record of Survey Maps and Parcel Maps are checked by this unit for mathematical accuracy and for compliance with the Land Surveyor's Act, the Subdivision Map Act, and local ordinances and other laws governing the practice of surveying. Such maps are recorded for any of three reasons: (1) to place on record a surveyor's solution to a given property line problem; (2) to meet a requirement of the Land Surveyor's Act or Subdivision Map Act; and, (3) to meet a requirement of a local ordinance such as Orange County's "Subdivision Code".

A breakdown of recorded or filed maps with a comparison between 1976 and 1977 is as follows:

		1976	1977	PERCENT OF 1976
RECORD OF SURVEY MAPS		18	41	228%
PARCEL MAPS	CITY	408	459	113%
	COUNTY	87	99	
TOTAL		513	599	117%

In addition to checking tract maps, parcel maps and record of survey maps, the Map Checking Unit assists private engineers and surveyors in researching and solving unusual survey problems which arise from time to time.

RECORDED PARCEL AND RECORD OF SURVEY MAPS



MAP DRAFTING UNIT - OFFICE GROUP

This unit maintains 92 county road maps, 81 county precinct maps and performs miscellaneous drafting work as required.

COUNTY ROAD MAPS: The County Road Maps show streets, subdivisions, records of surveys, parcel maps, county surveyor's maps, city boundaries, public properties, relinquishments of state highways to local jurisdiction and abandonments of public streets and public properties. The following changes were made on the road maps and their tracings during 1977.

439 New subdivisions were plotted.

234 New recorded documents affecting county properties and rights of way were delineated.

71 New city annexations of county territories were plotted.

COUNTY PRECINCT MAPS: The county precinct maps show all streets, precinct boundaries, census tracts, school districts, supervisorial districts, judicial districts, congressional districts, assembly districts, senatorial districts, and city boundaries. The following changes were made on the precinct maps and their overlays during 1977:

3459 Revisions were made at the request of the Registrar of Voters and as caused by city annexations and incorporations of county territory.

439 New subdivisions were plotted.

OFFICIAL COUNTY MAPS: Official county maps are located in various offices throughout the county. Eighteen maps were periodically updated to show correct city boundaries which changed due to annexations.

MISCELLANEOUS DRAFTING WORK: Consists of maps drafted or display maps prepared.

21 Maps for the Board of Supervisors
23 Maps for Survey Field Section
4 Maps for EMA Administrative Offices
1 Map for General Services Agency
19 Maps for Registrar of Voters
6 Maps for Deputy County Surveyor
51 Maps for County Surveyor's Office
16 Maps for Water Resources
4 Maps for County Administrative Office
2 Maps for Analytical Services

BOUNDARY UNIT - OFFICE GROUP

This unit examines all descriptions and maps of proposed formations, annexations, and/or de-annexations involving cities or districts, and reports its findings to the Board of Supervisors or the Local Agency Formation Commission.

When districts are involved such as school districts, judicial districts and districts governed by the Board of Supervisors, this unit prepared the necessary maps and legal descriptions for all formations and boundary changes.

During 1977 there were twenty six maps prepared and accompanying legal descriptions written for various districts such as County Service Areas, Orange County Street Lighting Maintenance Districts and Schools Districts. In addition eight exhibit maps were prepared for various county departments and one hundred nine display and exhibit maps were prepared for the Local Agency Formation Commission.

There are one hundred sixty five master maps and folders maintained by this unit. During 1977, two district folders were researched and brought up to date with new master maps prepared for each district.

In the following table, the first column indicates the number of proposed annexations and/or de-annexations to cities; the second column indicates the number of annexations and/or de-annexations which became final; and the third column indicates the number of acres included within the annexation and/or de-annexation which became final.

CITIES	PROPOSED ANNEXATIONS	ANNEXATIONS FINALIZED	NO. OF ACRES INCLUDED WITHIN ANNEXATIONS
Anaheim	11	13	320.090
Brea	3	3	38.981
Buena Park	1	0	0
Costa Mesa	2	1	3.710
Cypress	1	0	0
Fountain Valley	2	1	20.822
Fullerton	2	2	0.370
Garden Grove	7	5	6.825
Huntington Beach	0	0	0
Irvine	2	2	549.000
Laguna Beach	4	1	1.660
La Habra	9	11	47.700
La Palma	0	0	0
Los Alamitos	0	0	0
Newport Beach	4	2	1.735
Orange	13	14	404.150
Placentia	1	3	7.799
San Clemente	1	2	113.556
San Juan Capistrano	2	1	18.260
Santa Ana	0	0	0
Seal Beach	0	0	0
Stanton	0	0	0
Tustin	6	7	546.814
Villa Park	0	0	0
Westminster	1	1	9.99
Yorba Linda	2	2	1269.031
TOTAL	74	71	3360.493

Tabulated below in a similar manner as city boundary changes are the number of descriptions and maps processed for various taxable districts of the county.

NUMBER AND TYPE OF DISTRICTS	PROPOSED ANNEXATIONS	ANNEXATIONS FINALIZED
8 Sanitary	73	43
8 Sanitation	20	13
9 Lighting	13	12
11 Lighting Maintenance	47	43
3 Highway Lighting	1	0
4 Recreation & Park	3	3
3 Sewer Maintenance	3	2
13 County Service Areas	18	19
4 Library	1	1
23 Water	18	16
6 Improvement Districts within Water Districts	7	7
2 Waterworks	2	2
TOTAL	206	161

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FIELD SURVEY GROUP

The Field Survey Group maintains and extends horizontal and vertical control surveys, retraces section lines, and references and retraces street center lines throughout the County. This information is made available to the general public. In addition, this section does all the field survey work for projects of the Environmental Management Agency and other County departments as requested. The group is made up of eleven field survey parties and an office unit for computations.

HORIZONTAL CONTROL SURVEYS

Horizontal control surveys are made to establish and maintain the coordinated network of points on a single datum for the benefit of all engineering projects or boundary surveys within the County.

Major projects for which horizontal control has been completed during 1977 are:

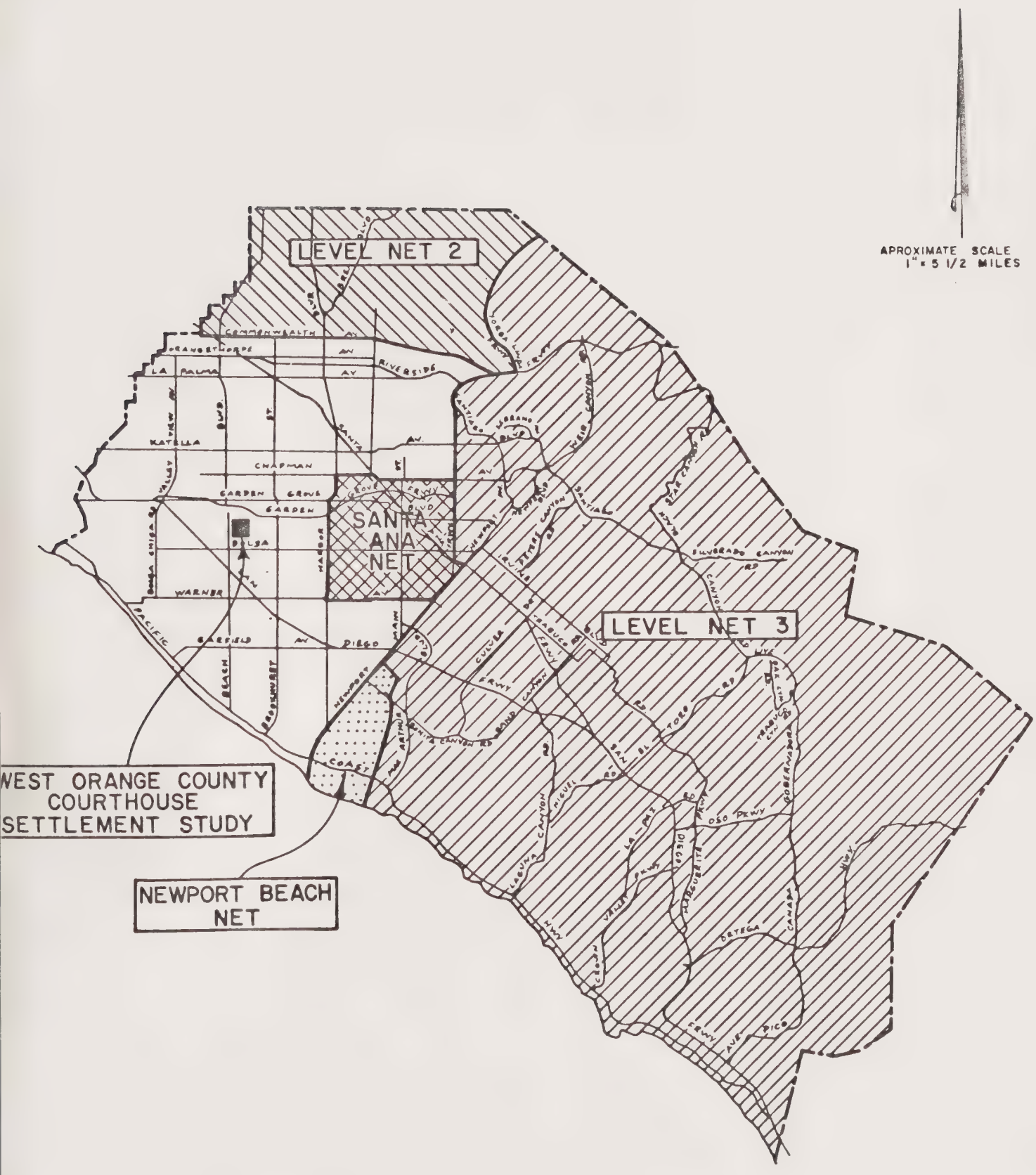
1. Mission Viejo - Moulton Control
2. Dana Point Harbor Control
3. Disposal Station 20 Control
4. Joplin Boys Ranch Control
5. Santiago Canyon Road
6. Panorama Heights Assessment District
7. Repositioning of "Browning 3", "Yorba 3" and "Smoke"
8. T3S R9W Section 1 and Section 8
9. Update Cal-Trans Control on Orange Freeway
10. San Joaquin Hills Transportation Corridor
11. Update of Cal-Trans San Bernadino Travese
12. Update of Brea Control
13. Update of Newport Beach, Seal Beach Control
14. Update of Huntington Beach Control

VERTICAL CONTROL SURVEYS

The vertical control surveys establish a precise common datum for elevations throughout the County. This information is made available to the general public. By releveling all previously established lines, it is determined where crustal movements have taken place within the County.

Approximately 76 miles of precise leveling was accomplished during 1977. The major projects are as follows:

1. Level Net 2
2. Level Net 3
3. Santa Ana Net
4. Newport Beach Net
5. West County Courthouse Settlement Study



VERTICAL CONTROL
1977

CENTERLINE SURVEYS

During 1977 approximately 9 miles of centerline were surveyed and referenced in the County. The following projects were completed during this period:

1. McFadden Avenue - Harbor to Fairview
2. Alicia Parkway at Paseo de Valencia
3. Lampson Avenue - Beach to Western
4. Lampson Avenue - Easterly of Beach
5. Stonehill Drive - Del Obispo to Selva
6. Selva Road - Street of the Golden Lantern to Stonehill
7. Ashgrove Drive at Faceta Drive
8. Andora Drive - Fairhope to Delafield
9. Cerritos Avenue - Valley View to Holder
10. Trabuco Road - El Toro to R/O Line
11. El Modena-Irvine Channel - Hewes to Solada
12. Walnut Avenue - Red Hill to Newport
13. Ashgrove Drive at Stanton Avenue
14. Los Alamitos Boulevard - Northeasterly 1/4, Section 19, T4S, R11W
15. Los Alamitos Boulevard at Cerritos
16. Bloomfield Avenue at Cerritos
17. Los Alisos Boulevard - Muirlands to Jeronimo
18. Moulton Parkway - 2200' N/O El Toro to Lake Forest Drive

BOUNDARY SURVEYS

The following boundary surveys were completed in 1977:

1. Westminster Channel - Beach Boulevard to Magnolia
2. Gilbert Cerritos Storm Drain - Orangewood to Ball
3. East Richfield Channel - Santa Ana River to Orangethorpe
4. Coyote Disposal Station
5. La Palma Storm Drain - Lemon to State College
6 Joplin Boys Ranch - Sections 1, 2, 12 and 13
7. West Boundary of Tract 5167 - Lot corner replacement
8. Santiago Creek - YMCA Property
9. State Farm Building - 17th and College
10. McFadden Avenue - Beach Boulevard to Ceaderwood

PHOTOGRAMMETRIC SURVEYS

Photogrammetric surveys are generally used to obtain preliminary survey information of a large area for planning and design of various projects. The field survey group prepares the agreement with the photogrammetrist, establishes the vertical and horizontal control and checks the final maps for accuracy and agreement with the specifications. The photogrammetric surveys completed in 1977 are as follows:

1. Olinda Refuse Disposal Station - Volume and Mapping
2. Santiago Canyon Refuse Disposal Station - Volume and Mapping
3. Coyote Canyon Refuse Disposal Station - Volume and Mapping
4. Prima Desecha Refuse Disposal Station - Volume and Mapping
5. Bolsa Avenue - Beach to Newland
6. Sunset Aquatic Park
7. Irvine Boulevard - Tustin City Limits to Lambert
8. Cabot Road - Crown Valley Parkway to Oso Parkway

MISCELLANEOUS SURVEYS

The following miscellaneous surveys were completed in 1977:

1. Posting for Districts, Sheriff and abandonments - 48 jobs
2. Movement Study - Villa Park Dam
3. Movement Study - Sulphur Creek Dam
4. Various potholes for utility locations
5. Numerous field map checks
6. Scour studies - Approximately 38 miles on the following O.C.F.C.D. Channels: B01, C02, D03, D05, E01, F05, F06, J01, L01 and L02
7. Flag R/W - Approximately 3 miles on the following:

   O.C.F.C.D. Channels - E08, F01, L01, L02; Crown Valley Community Park, Dana Point Public Access, Peacock Hills Equestrian Trail; Roads - Morada Drive, Mariana Drive, Crawford Canyon Road, Kellogg Drive and Camino Capistrano

PRELIMINARY SURVEYS

Approximately 34 miles of preliminary surveys have been accomplished during 1977. These surveys are used as a basis for planning and design of various projects. Following are the locations of these surveys:

	PROJECT	PROJECT LIMTS
1.	Gilbert-Cerritos Storm Drain	C03 to Katella
2.	La Habra Streets	Grace, Pacific and Liberty
3.	Monte Vista Avenue	U.P.R.R. to La Habra
4.	Transfer Station 2	Monthly Ramp Profiles
5.	Crown Valley Community Park	Westerly Boundary
6.	Ridgeview Park	Park Boundary
7.	Modjeska Community Center	Silverado Canyon Road
8.	Westminster Channel	Newland to Magnolia
9.	East Richfield Channel	Santa Ana River to Orangethorpe
10.	Ocean View Channel	Magnolia to Brookhurst
11.	Harbor-Edinger Storm Drain	N/O Santa Ana River to Edinger
12.	Hyland Storm Drain	Segerstrom to D03
13.	Gilbert-Cerritos Storm Drain	Katella to Ball
14.	Redhill Channel	F07 to Irvine
15.	Del Avion Storm Drain	L01 to Camino del Avion
16.	Brea Creek Channel	Beach to Dale
17.	Los Alamitos Basin	Westerly portion of C01B01
18.	Santa Ana River	Pacific Coast Highway to Adams
19.	Craig Park	Between Associated Road and Park Road
20.	Forrest Paul Park	Maintenance Yard on Garden Grove Blvd.
21.	Los Coyotes Regional Park	Rosecrans Ave. 300' each side of park
22.	Walnut Avenue Bridge	@ Peters Canyon Channel

PRELIMINARY SURVEYS (cont'd)

	PROJECT	PROJECT LIMITS
23.	Forrest Paul Park	Garden Grove Blvd. Bridge @ Santa Ana River
24.	Hewes Storm Drain	New Haven Drive to Hewes
25.	Moulton/Ridge Route	Across Veeh Reservoir
26.	Moulton Parkway	Ridge Route to 750' Northerly
27.	Irvine Boulevard	Tustin City Limits to Lambert
28.	Lake Forrest Drive	@ Moulton Parkway
29.	La Pata Avenue	1.1 miles S/o Ortega Highway
30.	Lakeview Avenue Bridge	@ Santa Ana River
31.	Tustin Avenue Bridge	@ Santa Ana River
32.	Kellogg Drive	Imperial Highway to Mountain View
33.	Calle Real Storm Drain	Pacific Coast Highway to Vista del Mar
34.	Calle Real Storm Drain	Vista del Mark to Calle Real
35.	Monte Vista Avenue	La Habra Boulevard to P.E.R.R.
36.	Trabuco Creek	Oso Road to Railroad
37.	Ramond-La Palma Storm Drain	A.T. & S.F.R.R. to Acacia
38.	Moody Creek Channel	Crescent to Moody
39.	Santa Ana River	Fairview to 17th
40.	Malena Storm Drain	Prospect to Mt. Hood
41.	Coyote Creek Channel	Walnut to Cypress
42.	Aliso Creek Channel	A.T. & S.F.R.R. to Jeronimo
43.	Escolar Storm Drain	S/O Avery Parkway
44.	Sunset Harbor	Dredge Site
45.	Featherly Regional Park	Play Area
46.	Carbon Canyon Regional Park	Sewer Location
47.	Dana Point Harbor	Boat Yard
48.	Dana Point Harbor	Locating Shoals
49.	Jamboree Boulevard Bridge	@ San Diego Creek
50.	Lakeview Avenue Bridge	@ Santa Ana River

PRELIMINARY SURVEYS (cont'd)

	PROJECT	PROJECT LIMITS
51.	Camino del Avion	Westerly of Del Obispo
52.	El Toro Road	2.4 Miles N/o Trabuco to Live Oak Cyn.
53.	Esperanza Road	Imperial to Fairlynn
54.	Marguerite Parkway	Water Tank
55.	Ridge Route Drive	Westerly of Avenida de La Carlota
56.	Sand Canyon Avenue	Santa Ana Freeway to Irvine Boulevard
57.	Street of the Golden Lantern	Pacific Coast Highway to Stonehill
58.	Stonehill Drive	W/o Intera Way to St. of the Golden Lantern
59.	Alicia Parkway	Moulton to Paseo de Valencia
60.	Hewes Avenue	17th Street to Fairhaven
61.	Bryan Avenue	@ Woodland Drive
62.	Esplanade Avenue	17th Street to Fairhaven
63.	Newland Street	Bolsa to Hazard
64.	Selva Road	Chula Vista to St. of the Golden Lantern
65.	Rossmoor Streets	Bostonian and Foster
66.	Edinger Avenue	Euclid to Brookhurst
67.	Carlton Tract	Second, Third, Fourth, Marda & Chestnut
68.	Various Streets	Supervisorial District 4
69.	Alley Reconstruction	Within Adams to Beach & Newport to Legion
70.	Grace Street	Euclid to Liberty
71.	Rose Drive	S/O Valencia
72.	Rose Drive	S/O Blake
73.	Red Gum	Coronado to La Cresta
74.	Arbolada Way	W/O Prospect
75.	Colleen Place	S/E of Santa Ana River
76.	Howland Way	Wellington to 17th Street
77.	Redlands Drive	Riverside to Mesa
78.	Orange Avenue	Main Street to Bixby Avenue

CONSTRUCTION SURVEYS

Approximately 30 miles of construction surveys were completed during 1977. These surveys were made for the construction of the following projects:

	PROJECT	PROJECT LIMITS
1.	Harbor-Edinger Pump Station	N/O Harbor and W/O Santa Ana River
2.	Gigi Storm Drain	Foothill to La Limonar
3.	Calle Real Storm Drain	Camino Capistrano to Vista del Mar
4.	E. Tustin Storm Drain (F07P01)	@ Newport
5.	Anaheim-Barber City Channel	Sioux Road to Edwards Street
6.	Santa Ana River	D.S. Adams to D.S. Garfield
7.	Loftus Channel	@ S.P.R.R.
8.	Moody Creek Channel	Crescent to Moody
9.	Cambridge Storm Drain	Santiago Creek to Chapman Avenue
10.	Marquita Storm Channel	Calle Puente to 180' S'ly of Chapman Ave.
11.	Talbert Channel	Ellis to Talbert
12.	Lemon-Taft Storm Drain	Center to Lemon
13.	Kraemer Storm Drain	Chapman Ave. to Southerly Alta Vista
14.	Coyote Creek Channel	Walnut to Cypress
15.	Stanton Storm Channel	Western to 200' W/O S.P.R.R. & Beach to 1000' E/O Beach
16.	Laguna Niguel Lake	Concession Building
17.	Carbon Canyon Regional Park	Fence
18.	Sand Canyon Avenue	Santa Ana Freeway to Irvine Boulevard
19.	Street of the Golden Lantern	Pacific Coast Hwy. to 553' N/O Selva Road
20.	Los Alisos/Muirlands	Rockfield to 500' Northerly, 513' to 310' Southerly El Toro Road
21.	Selva Road	290' W/O Chula Vista to St. of Golden Lantern
22.	Laurinda Way	17th Street to 353' Northerly

CONSTRUCTION SURVEYS (cont'd)

	PROJECT	PROJECT LIMITS
23.	Jamboree Road Bridge	@ San Diego Creek
24.	Main Street	680' to 1680' Southerly of Red Hill
25.	Marguerite Parkway	3153' Northerly of Avery to Crown Valley Pky.
26.	Alicia Park	Mission Viejo Area
27.	Placentia Basin (B01B04)	State College to Placentia
28.	Fullerton Creek/Kimberly S.C.	Lemon Street to A.T. & S.F.R.R./ Fullerton Cr. to E/O Raymond
29.	Aliso Creek Channel	@ Second Street
30.	Tract 7984	Permit Check
31.	Westminster Channel	@ Brookhurst
32.	14 Inch Waterline	Tract 8610
33.	Sunset Aquatic Reg. Park	Maint. Dredging
34.	Laguna Niguel Lake	Concession Building-Docking Facility
35.	San Juan Creek Bikeway	S. J. C. City Limits to Doheny St. Park
36.	El Toro Community Park	Los Alisos Blvd.-Rockfield to Muirlands
37.	Catalina-Monterrey Park	South Laguna
38.	Ball Road Bridge Widening	@ Santa Ana River
39.	Michelson Drive	San Diego Creek to San Joaquin
40.	17th Street Bridge	@ Santa Ana River
41.	McFadden Avenue Bridge	@ Santa Ana River
42.	Groveoak Drive	10501 Groveoak Drive
43.	Rockfield Boulevard	Signals @ Lake Forrest & @ El Toro
44.	Carbon Canyon Rd./Valencia Ave.	Valencia Ave. to 900' Easterly/850' to 2100' N/O Birch St.
45.	Trabuco Road	Lake Forrest Drive to El Toro Road
46.	Los Alisos Boulevard	Muirlands to Jeronimo
47.	Alicia Parkway	750' Northeasterly of Althea to Coronel
48.	El Modena Redevelopment	Street Construction
49.	Various Streets	Road Resurfacing

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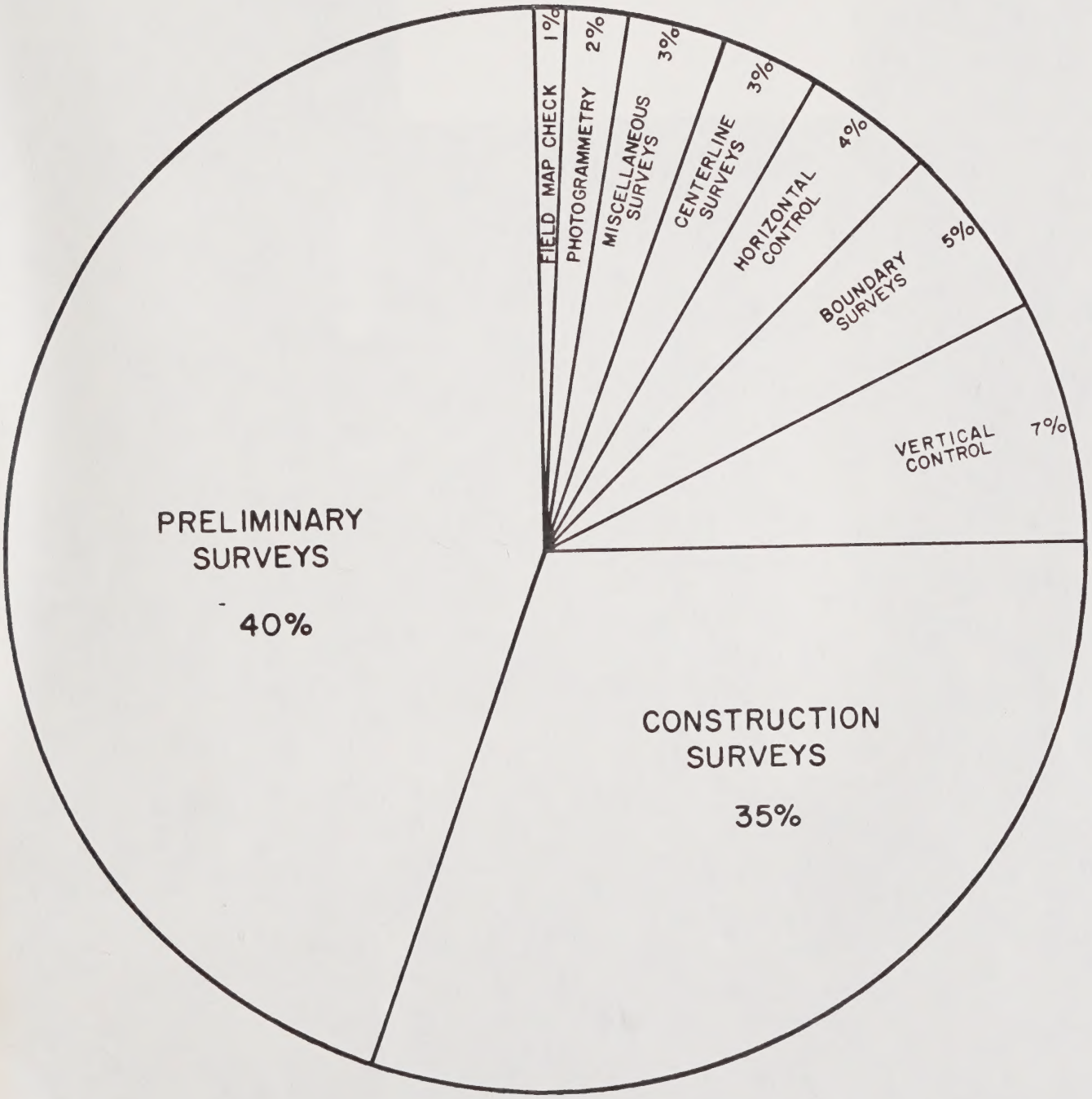
PROPORTIONAL DISTRIBUTION OF CLASSIFIED SURVEYS 1977



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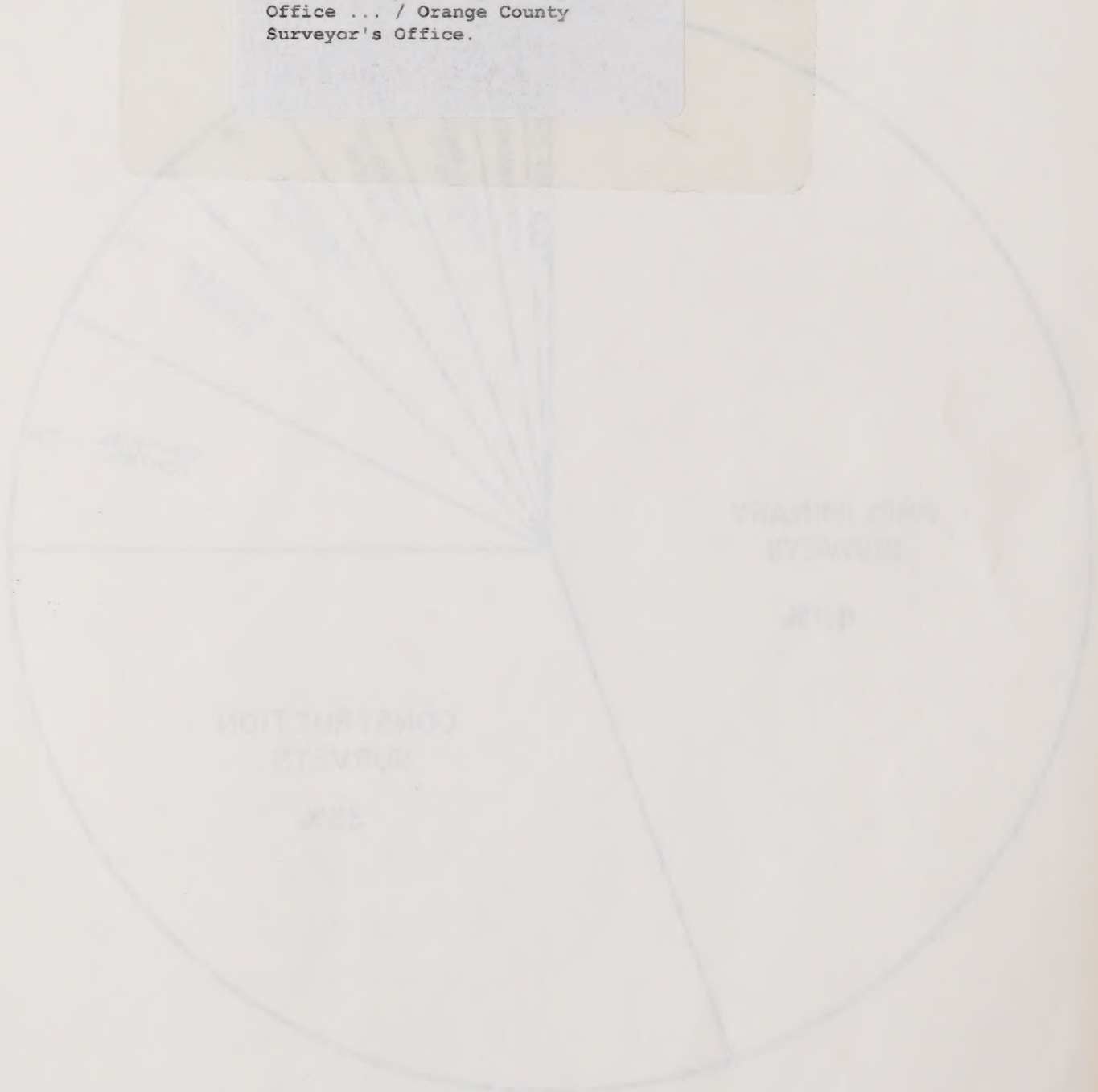

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